

**ABSTRACT OF THE DISCLOSURE**

A wafer W is placed on a lower electrode 106 provided inside a processing chamber 102 of an etching apparatus 100 and a gas containing C<sub>4</sub>F<sub>8</sub> is induced into the processing chamber 102. A controller 112 implements control to apply 27MHz power to an upper electrode 114 from a plasma generating power supply 120 and to intermittently apply 800KHz power to the lower electrode 106 from a biasing power supply 108. While the biasing power is on, an insulating film 202 constituted of SiO<sub>2</sub> at the wafer W is etched, whereas a polymer (protective film) 208 is formed at a photoresist film 206 while the biasing power is off. Adopting the above method, contact holes achieving a specific shape can be formed by improving the selectivity of the insulating film relative to the photoresist film.

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**EXPLANATION OF THE REFERENCE NUMERALS**

100 etching device  
102 processing chamber  
104 processing container  
106 lower electrode  
108 matcher  
110 biasing power supply  
121 controller  
114 upper electrode  
114a gas outlet hole  
116 insulating member  
118 matcher  
120 plasma generating power supply  
122 gas supply pipe  
124 evacuating pipe  
200 substrate  
202 insulating film  
206 photoresist film  
208 polymer (protective film)  
210 contact hole  
W wafer

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